

Claims

What is claimed is:

5 1. A seat comprising:
 a seat comfort zone that peripherally encompasses a pelvic zone;
 a front seat zone adjacent to a front side of the seat comfort zone; and
 a first side seat zone, second side seat zone and rear seat zone peripherally encompassing
10 a first side, second side and rear side, respectively, of the seat comfort zone;

 wherein the seat comfort zone, the pelvic zone, the first side seat zone, the second side
 seat zone, the front seat zone, and the rear seat zone include a soft elastic material; and

 wherein the front seat zone is less firm than the first side seat zone, the second side seat
15 zone, the rear seat zone, the seat comfort zone and the pelvic zone; the first side seat zone, the
 second side seat zone and the rear seat zone are more firm than the front seat zone, the seat
 comfort zone and the pelvic zone; and the pelvic zone is more elastic than the front seat zone, the
 comfort zone, the first side seat zone, the second side seat zone and the rear seat zone.

20 2. The seat of claim 1 further comprising a backrest angularly connected to an area distal to
 the front seat zone.

 3. The seat of claim 1 wherein the soft elastic material is a continuous, one piece seamless
25 material.

 4. The seat of claim 1 wherein the soft elastic material includes polyurethane foam,
 shredded foam, High Resilience foam, rubber, latex foam rubber, down, polyester, cotton, or a
 combination thereof.

5. The seat of claim 1 wherein the soft elastic material includes at least two pieces.

6. The seat of claim 5 wherein the at least two pieces of the soft elastic material can be integrally assembled by attachment means including sewing, adhesives, bonding, or a combination thereof.

7. The seat of claim 1 that further comprising a seat covering that covers the seat.

8. The seat of claim 7 wherein the seat covering includes non-woven fabrics, woven fabrics, knitted cloth, vinyl, leather, or a combination thereof.

9. The seat of claim 1 wherein the seat comfort zone, the pelvic zone, the front seat zone, the first side seat zone, the second side seat zone, the rear seat zone, or a combination thereof include an Indentation Force Deflection of about 4 to about 80 pounds per 50 inches squared at 25% deflection on a 20" x 20" x 4" thick sample.

10. The seat of claim 1 wherein the front seat zone includes an Indentation Force Deflection of about 4 to about 25 pounds per 50 inches squared at 25% deflection on a 20" x 20" x 4" thick sample.

11. The seat of claim 1 wherein the seat comfort zone, the pelvic zone, or a combination thereof include an Indentation Force Deflection of about 26 to about 40 pounds per 50 inches squared at 25% deflection on a 20" x 20" x 4" thick sample.

12. The seat of claim 1 wherein the first side seat zone, the second size seat zone, the rear seat zone, or a combination thereof of include an Indentation Force Deflection of about 41 to about 80 pounds per 50 inches squared at 25% deflection on a 20" x 20" x 4" thick sample.

13. The seat of claim 1 wherein the seat comfort zone, the pelvic zone, the front seat zone, the first side seat zone, the second side seat zone, the rear seat zone include, or a combination thereof include a Support Factor of about 1.0 to about 3.5.

5 14. The seat of claim 1 wherein the front seat zone has a resilience of at least 5%.

15. The seat of claim 1 wherein the front seat zone has a resilience of at least 10%.

16. The seat of claim 1 wherein the front seat zone has a resilience of at least 15%.

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17. The seat of claim 1 wherein the seat comfort zone, the first side seat zone, the second side seat zone, the rear seat zone, or a combination thereof have a resilience of at least 20%.

15 18. The seat of claim 1 wherein the seat comfort zone, the first side seat zone, the second side seat zone, the rear seat zone, or a combination thereof have a resilience of at least 25%.

19. The seat of claim 1 wherein the seat comfort zone, the first side seat zone, the second side seat zone, the rear seat zone, or a combination thereof have a resilience of at least 30%.

20 20. The seat of claim 1 wherein the pelvic zone has a resilience of at least 40%.

21. The seat of claim 1 wherein the pelvic zone has a resilience of at least 50%.

22. The seat of claim 1 wherein the pelvic zone has a resilience of at least 60%.

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23. The seat of claim 1 wherein at least one of the seat comfort zone, the pelvic zone, the front seat zone, the first side seat zone, the second side seat zone and the rear seat zone is manufactured from foam cushion formed from: (a) at least one of rubber and a resin; (b) a

blowing agent; (c) a polymeric adhesion modifier; (d) a decomposition accelerating agent, and (e) a cross-linking agent.

24. The seat of claim 1 wherein at least one of the seat comfort zone, the pelvic zone, the front seat zone, the first side seat zone, the second side seat zone and the rear seat zone is manufactured from foam cushion formed from: (a) at least one of natural rubber and an ethylene-vinyl acetate (EVA) copolymer; (b) azodicarbonamide (AC); (c) FUSABOND; (d) dicumyl peroxide; and (e) a combination of zinc oxide and stearic acid.

25. The seat of claim 1 wherein at least one of the seat comfort zone, the pelvic zone, the front seat zone, the first side seat zone, the second side seat zone and the rear seat zone is manufactured from foam cushion formed from: (a) natural rubber present in about 5 wt.% to about 12 wt.% of the foam cushion; (b) an ethylene-vinyl acetate (EVA) copolymer present in about 79 wt.% to about 83 wt.% of the foam cushion; (c) azodicarbonamide (AC) present in about 3 wt.% to about 4.2 wt.% of the foam cushion; (d) FUSABOND present in about 2.8 wt.% to about 3.9 wt.% of the foam cushion; (e) dicumyl peroxide present in about 0.5 wt.% to about 0.9 wt.% of the foam cushion; and (f) a combination of zinc oxide and stearic acid, wherein the zinc oxide is present in about 1.0 wt.% to about 2.2 wt.% of the foam cushion and stearic acid is present in about 0.5 wt.% to about 1.25 wt.% of the foam cushion.

26. A seat comprising:
 a seat comfort zone that peripherally encompasses a pelvic zone;
 a front seat zone adjacent to a front side of the seat comfort zone;
 a first side seat zone, second side seat zone and rear seat zone peripherally encompassing a first side and second opposite side of the seat comfort zone;
 a backrest angularly connected to an area distal to the front seat zone, the backrest further comprising:
 a lower back zone that peripherally encompasses a center back zone on two opposite

sides;

a backrest comfort zone peripherally encompassing the lower back zone and the center back zone;

a first side backrest zone and second side backrest zone peripherally encompassing a first side and second opposite side of the backrest comfort zone; and

a head zone distal to the seat

wherein the seat comfort zone, the pelvic zone, the first side seat zone, the second side seat zone, the front seat zone, the rear seat zone, the center back zone, the lower back zone, the backrest comfort zone, the head zone, the first side backrest zone and the second side backrest zone include a soft elastic material; and

wherein the front seat zone is less firm than the first side seat zone, the second side seat zone, the rear seat zone, the seat comfort zone and the pelvic zone; the first side seat zone, the second side seat zone and the rear seat zone are more firm than the front seat zone, the seat comfort zone and the pelvic zone; and the pelvic zone is more elastic than the front seat zone, the comfort zone, the first side seat zone, the second side seat zone and the rear seat zone; and

wherein the center back zone and the head zone are less firm than the lower back zone, the backrest comfort zone, the first side backrest zone and the second side backrest zone; the first side backrest zone and the second side backrest zone are more firm than the center back zone, the head zone, the lower back zone and the backrest comfort zone; and the lower back zone is more elastic than the center back zone, the head zone, the backrest comfort zone, the first side backrest zone and the second side backrest zone.

27. The seat, backrest, or both of claim 26 wherein the soft elastic material is a continuous, one piece seamless material.

28. The seat, backrest, or both of claim 26 wherein the soft elastic material includes polyurethane foam, shredded foam, High Resilience foam, latex foam rubber, down, polyester, cotton, or a combination thereof.

5 29. The seat, backrest, or both of claim 26 wherein the soft elastic material includes at least two pieces.

30. The seat, backrest, or both of claim 29 wherein the at least two pieces of the soft elastic material can be integrally assembled by attachment means including sewing, adhesives, bonding,
10 or a combination thereof.

31. The seat, backrest, or both of claim 26 that includes a covering that covers the seat, the backrest, or both.

15 32. The seat, backrest, or both of claim 31 wherein the covering includes non-woven fabrics, woven fabrics, knitted cloth, vinyl, leather, or a combination thereof.

33. The seat, backrest, or both of claim 26 wherein the seat comfort zone, the pelvic zone, the front seat zone, the first side seat zone, the second side seat zone, the rear seat zone, the center
20 back zone the head zone, the lower back zone, the backrest comfort zone, the first side backrest zone, the second side backrest zone, or a combination thereof include an Indentation Force Deflection of about 4 to about 80 pounds per 50 inches squared at 25% deflection on a 20" x 20" x 4" thick sample.

25 34. The seat, backrest, or both of claim 26 wherein the front seat zone, the center back zone, the head zone, or a combination thereof include an Indentation Force Deflection of about 4 to about 25 pounds per 50 inches squared at 25% deflection on a 20" x 20" x 4" thick sample.

35. The seat, backrest, or both of claim 26 wherein the seat comfort zone, the pelvic zone, the lower back zone, the backrest comfort zone, or a combination thereof include an Indentation Force Deflection of about 26 to about 40 pounds per 50 inches squared at 25% deflection on a 20" x 20" x 4" thick sample.

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36. The seat, backrest, or both of claim 26 wherein the first side seat zone, the second size seat zone, the rear seat zone, the first side backrest zone, the second side backrest zone, or a combination thereof include an Indentation Force Deflection of about 41 to about 80 pounds per 50 inches squared at 25% deflection on a 20" x 20" x 4" thick sample.

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37. The seat, backrest, or both of claim 26 wherein the seat comfort zone, the pelvic zone, the front seat zone, the first side seat zone, the second side seat zone, the rear seat zone, or a combination thereof include a Support Factor of about 1.0 to about 3.5.

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38. The seat, backrest, or both of claim 26 wherein the front seat zone, the center back zone, the head zone, or a combination thereof have a resilience of at least 5%.

39. The seat, backrest, or both of claim 26 wherein the front seat zone, the center back zone, the head zone, or a combination thereof have a resilience of at least 10%.

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40. The seat, backrest, or both of claim 26 wherein the front seat zone, the center back zone, the head zone, or a combination thereof have a resilience of at least 15%.

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41. The seat, backrest, or both of claim 26 wherein the seat comfort zone, the backrest comfort zone, the first side seat zone, the second side seat zone, the rear seat zone, the first side backrest zone, the second side backrest zone or a combination thereof have a resilience of at least 20%.

42. The seat, backrest, or both of claim 26 wherein the seat comfort zone, the backrest comfort zone, the first side seat zone, the second side seat zone, the rear seat zone, the first side backrest zone, the second side backrest zone or a combination thereof have a resilience of at least 25%.

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43. The seat, backrest, or both of claim 26 wherein the seat comfort zone, the backrest comfort zone, the first side seat zone, the second side seat zone, the rear seat zone, the first side backrest zone, the second side backrest zone or a combination thereof have a resilience of at least 30%.

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44. The seat, backrest, or both of claim 26 wherein the pelvic zone, the lower back zone, or a combination thereof have a resilience of at least 40%.

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45. The seat, backrest, or both of claim 26 wherein the pelvic zone, the lower back zone, or a combination thereof have a resilience of at least 50%.

46. The seat, backrest, or both of claim 26 wherein the pelvic zone, the lower back zone, or a combination thereof have a resilience of at least 60%.

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47. The seat, backrest, or both of claim 26 wherein at least one of the seat comfort zone, the backrest comfort zone, the first side seat zone, the second side seat zone, the rear seat zone, the first side backrest zone, and the second side backrest zone is manufactured from foam cushion formed from: (a) at least one of rubber and a resin; (b) a blowing agent; (c) a polymeric adhesion modifier; (d) a decomposition accelerating agent, and (e) a cross-linking agent.

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48. The seat, backrest, or both of claim 26 wherein at least one of the seat comfort zone, the backrest comfort zone, the first side seat zone, the second side seat zone, the rear seat zone, the first side backrest zone, and the second side backrest zone is manufactured from foam cushion

formed from: (a) at least one of natural rubber and an ethylene-vinyl acetate (EVA) copolymer; (b) azodicarbonamide (AC); (c) FUSABOND; (d) dicumyl peroxide; and (e) a combination of zinc oxide and stearic acid.

5 49. The seat, backrest, or both of claim 26 wherein at least one of the seat comfort zone, the
backrest comfort zone, the first side seat zone, the second side seat zone, the rear seat zone, the
first side backrest zone, and the second side backrest zone is manufactured from foam cushion
formed from: (a) natural rubber present in about 5 wt.% to about 12 wt.% of the foam cushion;
10 (b) an ethylene-vinyl acetate (EVA) copolymer present in about 79 wt.% to about 83 wt.% of the
foam cushion; (c) azodicarbonamide (AC) present in about 3 wt.% to about 4.2 wt.% of the foam
cushion; (d) FUSABOND present in about 2.8 wt.% to about 3.9 wt.% of the foam cushion; (e)
dicumyl peroxide present in about 0.5 wt.% to about 0.9 wt.% of the foam cushion; and (f) a
combination of zinc oxide and stearic acid, wherein the zinc oxide is present in about 1.0 wt.% to
about 2.2 wt.% of the foam cushion and stearic acid is present in about 0.5 wt.% to about 1.25
15 wt.% of the foam cushion.

50. A seat comprising:
a seat comfort zone that peripherally encompasses a pelvic zone;
a front seat zone adjacent to a front side of the seat comfort zone;
20 a first side seat zone, second side seat zone and rear seat zone peripherally encompassing
a first side and second opposite side of the seat comfort zone;
a backrest angularly connected to an area distal to the front seat zone, the backrest further
comprising:
a lower back zone that peripherally encompasses a center back zone on two opposite
25 sides;
a backrest comfort zone peripherally encompassing the lower back zone and the center
back zone;
a first side backrest zone and second side backrest zone peripherally encompassing a first

side and second opposite side of the backrest comfort zone; and
a head zone distal to the seat

5 wherein the seat comfort zone, the pelvic zone, the first side seat zone, the second side seat zone, the front seat zone, the rear seat zone, the center back zone, the lower back zone, the backrest comfort zone, the head zone, the first side backrest zone and the second side backrest zone include a soft elastic material; and

10 wherein the front seat zone is less firm than the first side seat zone, the second side seat zone, the rear seat zone, the seat comfort zone and the pelvic zone; the first side seat zone, the second side seat zone and the rear seat zone are more firm than the front seat zone, the seat comfort zone and the pelvic zone; and the pelvic zone is more elastic than the front seat zone, the comfort zone, the first side seat zone, the second side seat zone and the rear seat zone;

15 wherein the center back zone and the head zone are less firm than the lower back zone, the backrest comfort zone, the first side backrest zone and the second side backrest zone; the first side backrest zone and the second side backrest zone are more firm than the center back zone, the head zone, the lower back zone and the backrest comfort zone; and the lower back zone is more elastic than the center back zone, the head zone, the backrest comfort zone, the first side backrest zone and the second side backrest zone;

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wherein at least one of the seat comfort zone, the backrest comfort zone, the first side seat zone, the second side seat zone, the rear seat zone, the first side backrest zone, and the second side backrest zone is manufactured from foam cushion formed from: (a) at least one of rubber and a resin; (b) a blowing agent; (c) a polymeric adhesion modifier; (d) a decomposition
25 accelerating agent, and (e) a cross-linking agent.

51. The seat of claim 50 wherein at least one of the seat comfort zone, the backrest comfort zone, the first side seat zone, the second side seat zone, the rear seat zone, the first side backrest zone, and the second side backrest zone is manufactured from foam cushion formed from: (a) at least one of natural rubber and an ethylene-vinyl acetate (EVA) copolymer; (b) azodicarbonamide (AC); (c) FUSABOND; (d) dicumyl peroxide; and (e) a combination of zinc oxide and stearic acid.

52. The seat of claim 50 wherein at least one of the seat comfort zone, the backrest comfort zone, the first side seat zone, the second side seat zone, the rear seat zone, the first side backrest zone, and the second side backrest zone is manufactured from foam cushion formed from: (a) natural rubber present in about 5 wt.% to about 12 wt.% of the foam cushion; (b) an ethylene-vinyl acetate (EVA) copolymer present in about 79 wt.% to about 83 wt.% of the foam cushion; (c) azodicarbonamide (AC) present in about 3 wt.% to about 4.2 wt.% of the foam cushion; (d) FUSABOND present in about 2.8 wt.% to about 3.9 wt.% of the foam cushion; (e) dicumyl peroxide present in about 0.5 wt.% to about 0.9 wt.% of the foam cushion; and (f) a combination of zinc oxide and stearic acid, wherein the zinc oxide is present in about 1.0 wt.% to about 2.2 wt.% of the foam cushion and stearic acid is present in about 0.5 wt.% to about 1.25 wt.% of the foam cushion.